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EXAMINER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



DETAILED ACTION

***Claim Rejections - 35 USC § 103***

1. Claims 1-6, 9, 10, 12, 14, 15, 18, 19, 21-26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,948,560 to Rop in view of WIPO Publication WO 03/036203 to Antos. Rop teaches a refrigerator that comprises a housing with a door pivotally coupled to the housing and particularly focusing on the embodiment seen in figures 4-7. A striker (11a, 12a, 13a) is connected to the housing. A latching arrangement is carried by the door and includes a handle (20a) connected to the door for movement between a first position and a second position. The handle has a first free end attached to the first pivot as seen in figure 7 and a second free end located proximate the cam follower (19a). The handle (20a) defines an cam surface (24a) that is a pin. A pawl (18a, 16a, 17a) is connected to the door for movement between a latched position that is engaged with the striker for securing the door in a closed position and an unlatched position allowing the door to be pivoted from the closed position. The pawl including a cam follower (19a) that is a curved slot and is driven in arcuate path around a second pivot axis (15a) by the cam surface (24a) and thereby rotates the pawl from the latched position (Fig 4) to the unlatched position (Fig 5). The pawl is pivotally connected to the door for rotation about a second pivot axis (15a). A biasing element (22a) biases the handle via the slot and pin arrangement of the pawl. The latching arrangement is located at an edge of the door and the handle is generally parallel to the face of the door. The cam surface (24a) is the surface of a pin and therefore is curved. A line can be drawn between the first and seconds pivot axis making them located

along said line and the line would be substantially parallel to a front face of the door. As seen in figure 7, the pawl and a portion of the handle are disposed in a housing on the door and is considered a portion of the door and therefore a recess of the door.

Therefore the latching arrangement is considered disposed in the recess of the door.

Also it is substantially hidden from view since most of the latching arrangement is in the recess and is considered almost completely hidden from view since the perimeter of the door and the back surface of the door conceals the handle when the door is open and viewed from the side or back of the door.

2. Rop does not expressly disclose a cap portion defining a recess disposed within the door. Antos teaches a refrigerator (10) with a latching arrangement (30,40). The latching arrangement (40) is located in a recess of a cap portion (28) at the top of the refrigerator door (14). The latching arrangement (30) is composed of a handle (44), pawl (46), and striker (32). The handle (44) drives the pawl (46) to rotate around a fixed axis (42) to engage or disengage from the striker (32) on the housing. The handle (44) and pawl (46) is concealed behind a perimeter of the door as best seen in figures 2 and 5. At the time of the time of the invention it would have been obvious for a person of ordinary skill in the art to modify the refrigerator of Rop by adding the cap portion to the side or top of the refrigerator as taught by Autos to conceal controls or to allow a finger grip portion of the door while opening. The examiner also considered the cap portion to aid in the aesthetics of the door.

3. Regarding claims 9, 10, 18, 19 and 26, Rop in view of Antos discloses every element as claimed except that the handle having a slot curved along its length to

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define the cam surface and the second pivot axis as being vertical. It would have been obvious for a person of ordinary skill in the art to modify the latching arrangement of Rop by having the making the cam surface the curved slot (19a) on the handle and the cam follower the pin (15a) on the pawls, since applicant has not disclosed that having the slots and the cam follower in these locations solves any stated problem or is for any particular purpose and it appears that the latching arrangement would perform equally well with the curved cam surface of the slots being on the pawl and the cam follower being the curved pin on the handle since it is functionally equivalent and works equally well. Note: It has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See MPEP § 2144.04.

4. Regarding claim 26, Rop in view of Antos does not expressly disclose the second pivot axis as being vertical. The embodiment as seen in figures 1-3 of Rop have the second pivot axis vertical. It would have been obvious for a person of ordinary skill in the art to modify Rob by having rotating the striker and pawl so they function as seen in figures 1-3, since applicant has not disclosed that having the second pivot axis vertical solves any stated problem or is for any particular purpose and it appears that the latching arrangement would perform equally well with the second pivot axis horizontal since it is functionally equivalent and works equally well.

5. The axes are considered to be rearward of a front face of the door since as in figure 7 and further compared with figure 10 the front face of the door has an arcuate shape such that the center of the door bows out from the end making the axis toward the rearward of the center bowed section on the front face of the door.

6. Claims 7, 8, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,948,560 to Rop in view of WIPO Publication WO 03/036203 to Antos as applied to claims 1-6, 9, 10, 12, 14, 15, 18, 19, 21-26, and 29 above, and further in view of US Patent 5,906,423 to Lyu. Rop in view of Antos discloses every element as claimed except a leaf spring carried by the handle for biasing the handle. Lyu teaches a handle for a refrigerator that includes a first pivot axis at a first free end (24) and proximate to the second end is a leaf spring (61) in contact with a ledge (20b) of the handle (20) to force the handle to a first position. The handle (20) is configured as a pull handle in that the handle is moved away from the door to help the door open. At the time of the invention it would have been obvious for a person of ordinary skill in the art to make the handle as Rop a pull handle as taught in the embodiment in figure 8 and 9, but use the same slot and pin structure of the embodiment of figures 4-7. This is done by mirroring the slots around the pin so that when the pin is moved with the handle, the slots are driven and thereby cause the pawls to rotate and the motivation for this is that it will be easier to unlatch the door since it is the same motion as needed to continue to open the door. Note: It has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See MPEP § 2144.04.

7. At the time of the invention it would have been obvious to modify the modified latching arrangement of Rop in view of Antos by adding in a leaf spring and ledge as taught by Lyu to help return the handle to the latched position.

8. Claims 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 2,948,560 to Rop in view of WIPO Publication WO 03/036203 to Antos as applied to claims 1-6, 9, 10, 12, 14, 15, 18, 19, 21-26, and 29 above, and further in view of US Patent 2,172,467 to Geddes. Rop in view of Antos discloses every element as claimed and discussed above except the curved slot being defined by a pair of fingers. Geddes teaches a refrigerator latch with a lever arm (18) with a slot (19) defined by a pair fingers on both sides of the slot (19) that have a cam surface that engage a cam follower (20). At the time of the invention it would have been obvious for a person of ordinary skill to modify the handle of Rop in view of Antos by having the slots being open at one end as taught by Geddes, which will make the latching arrangement easier to assemble and once assembled is functionally equivalent and works equally well.

9. Claims 1-6, 9, 10, 12, 14, 15, 18, 19, 21-26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO Publication WO 03/036203 to Antos in view of US Patent 2,948,560 to Rop. Antos teaches a refrigerator (10) with a latching arrangement (30,40). The latching arrangement (40) is located in a recess of a cap portion (28) at the top of the refrigerator door (14). The latching arrangement (30) is composed of a handle (44), pawl (46), and striker (32). The handle (44) drives the pawl (46) to rotate around a fixed axis (42) to engage or disengage from the striker (32) on the housing. The handle (44) and pawl (46) is concealed behind a perimeter of the door as best seen in figures 2 and 5.

10. Antos does not expressly disclose the pawl and handle being separated entities with a cam surfaces connecting the handle and pawl.

11. Rop teaches a refrigerator that comprises a housing with a door pivotally coupled to the housing and particularly focusing on the embodiment seen in figures 4-7. A striker (11a, 12a, 13a) is connected to the housing. A latching arrangement is carried by the door and includes a handle (20a) connected to the door for movement between a first position and a second position. The handle has a first free end attached to the first pivot as seen in figure 7 and a second free end located proximate the cam follower (19a). The handle (20a) defines an cam surface (24a) that is a pin. A pawl (18a, 16a, 17a) is connected to the door for movement between a latched position that is engaged with the striker for securing the door in a closed position and an unlatched position allowing the door to be pivoted from the closed position. The pawl including a cam follower (19a) that is a curved slot and is driven in arcuate path around a second pivot axis (15a) by the cam surface (24a) and thereby rotates the pawl from the latched position (Fig 4) to the unlatched position (Fig 5). The pawl is pivotally connected to the door for rotation about a second pivot axis (15a). A biasing element (22a) biases the handle via the slot and pin arrangement of the pawl. The latching arrangement is located at an edge of the door and the handle is generally parallel to the face of the door. The cam surface (24a) is the surface of a pin and therefore is curved. A line can be drawn between the first and seconds pivot axis making them located along said line and the line would be substantially parallel to a front face of the door. As seen in figure 7, the pawl and a portion of the handle are disposed in a housing on the door and is considered a portion



of the door and therefore a recess of the door. Therefore the latching arrangement is considered disposed in the recess of the door. Also it is substantially hidden from view since most of the latching arrangement is in the recess and is considered almost completely hidden from view since the perimeter of the door and the back surface of the door conceals the handle when the door is open and viewed from the side or back of the door.

12. At the time of the invention it would have been obvious for a person of ordinary skill in the art to modify the latching arrangement of Antos by using a separate pawl and handles rotating around vertical axis as taught by Rop to allow the door to be only partial closed since the latch mechanism will pull the door tightly closed.

13. Regarding claims 9, 10, 18, 19 and 26, Autos in view of Rop discloses every element as claimed except that the handle having a slot curved along its length to define the cam surface and the second pivot axis as being vertical. It would have been obvious for a person of ordinary skill in the art to modify the latching arrangement of Rop by having the making the cam surface the curved slot (19a) on the handle and the cam follower the pin (15a) on the pawls, since applicant has not disclosed that having the slots and the cam follower in these locations solves any stated problem or is for any particular purpose and it appears that the latching arrangement would perform equally well with the curved cam surface of the slots being on the pawl and the cam follower being the curved pin on the handle since it is functionally equivalent and works equally well. Note: It has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See MPEP § 2144.04.

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14. Regarding claim 26, Antos in view of Rop does not expressly disclose the second pivot axis as being vertical. The embodiment as seen in figures 1-3 of Rop have the second pivot axis vertical. It would have been obvious for a person of ordinary skill in the art to modify Rob by having rotating the sticker and pawl so they function as seen in figures 1-3, since applicant has not disclosed that having the second pivot axis vertical solves any stated problem or is for any particular purpose and it appears that the latching arrangement would perform equally well with the second pivot axis horizontal since it is functionally equivalent and works equally well.

15. The axes are considered to be rearward of a front face of the door since as in figure 7 and further compared with figure 10 the front face of the door has an arcuate shape such that the center of the door bows out from the end making the axis toward the rearward of the center bowed section on the front face of the door.

16. Claims 7, 8, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO Publication WO 03/036203 to Antos in view of US Patent 2,948,560 to Rop as applied to claims 1-6, 9, 10, 12, 14, 15, 18, 19, 21-26, and 29 above, and further in view of US Patent 5,906,423 to Lyu. Antos in view of Rop discloses every element as claimed except a leaf spring carried by the handle for biasing the handle. Lyu teaches a handle for a refrigerator that includes a first pivot axis at a first free end (24) and proximate to the second end is a leaf spring (61) in contact with a ledge (20b) of the handle (20) to force the handle to a first position. The handle (20) is configured as a pull handle in that the handle is moved away from the door to

help the door open. At the time of the invention it would have been obvious for a person of ordinary skill in the art to make the handle as Rop a pull handle as taught in the embodiment in figure 8 and 9, but use the same slot and pin structure of the embodiment of figures 4-7. This is done by mirroring the slots around the pin so that when the pin is moved with the handle, the slots are driven and thereby cause the pawls to rotate and the motivation for this is that it will be easier to unlatch the door since it is the same motion as needed to continue to open the door. Note: It has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. See MPEP § 2144.04.

At the time of the invention it would have been obvious to modify the modified latching arrangement of Antos in view of Rop by adding in a leaf spring and ledge as taught by Lyu to help return the handle to the latched position.

17. Claims 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO Publication WO 03/036203 to Antos in view of US Patent 2,948,560 to Rop as applied to claims 1-6, 9, 10, 12, 14, 15, 18, 19, 21-26, and 29 above, and further in view of US Patent 2,172,467 to Geddes. Antos in view of Rop discloses every element as claimed and discussed above except the curved slot being defined by a pair of fingers. Geddes teaches a refrigerator latch with a lever arm (18) with a slot (19) defined by a pair fingers on both sides of the slot (19) that have a cam surface that engage a cam follower (20). At the time of the invention it would have been obvious for a person of ordinary skill to modify the handle of Antos in view of Rop by having the slots being

open at one end as taught by Geddes, which will make the latching arrangement easier to assemble and once assembled is functionally equivalent and works equally well.

### ***Response to Arguments***

1. Applicant's arguments filed 5/12/08 have been fully considered but they are not persuasive. The cap portion Antos is considered to define a recess behind the front that hides the handle form view as best seen in figure 10.

### ***Conclusion***

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY M. AYRES whose telephone number is (571)272-8299. The examiner can normally be reached on MON-THU 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. M. A./  
Examiner, Art Unit 3637  
8/25/2008

/Janet M. Wilkens/  
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